CLAIMS

1. A therapeutic agent for inhibiting vascularization comprising as the effective ingredient, a substance that inhibits the action due to CXCR4.

2. A therapeutic agent for a solid cancer comprising as the effective ingredient, a substance that inhibits the action due to CXCR4.

3. A therapeutic agent for a disease pathologically caused by neovascularization comprising as the effective ingredient, a substance that inhibits the action due to CXCR4.

4. A therapeutic agent for repairing a tissue comprising as the effective ingredient, a substance that inhibits the action due to CXCR4.

5. The therapeutic agent according to ~~any of~~ Claim 1 ~~claims 1-4~~, wherein the substance inhibits the ~~very~~ binding between SDF-1 and CXCR4.

6. The therapeutic agent according to ~~any of~~ Claim 1 ~~claims 1-4~~, wherein the substance inhibits signaling from CXCR4 to nuclei.

7. The therapeutic agent according to ~~any of~~ Claim 1 ~~claims 1-4~~, wherein the substance inhibits the ~~very~~ expression of CXCR4.

8. The therapeutic agent according to ~~any of~~ Claim 1 ~~claims 1-4~~, wherein the substance inhibits the ~~very~~ expression of SDF-1.

9. The therapeutic agent according to claim 5, wherein the substance inhibits SDF-1.

10. The therapeutic agent according to claim 5, wherein the substance inhibits CXCR4.

11. The therapeutic agent according to claim 9, wherein the substance inhibits CXCR4 in antagonistic competition with SDF-1.

12. The therapeutic agent according to claim 9, wherein the substance inhibits SDF-1 from binding to CXCR4 by binding to SDF-1.

13. The therapeutic agent according to claim 11, wherein the substance is one selected from the group consisting of a SDF-1-like protein, a fused protein of the foregoing protein with another peptide or polypeptide, a partial peptide of SDF-1, and a low molecular weight compound having a structure similar to a binding site of SDF-1.

14. The therapeutic agent according to claim 12, wherein the substance is one selected from the group consisting of an anti-SDF-1 antibody, a fragment of said antibody possessing the activity of the anti-SDF-1 antibody, a fused protein possessing binding activity to SDF-1, a substance that induces a structural change in SDF-1, and a low molecular weight compound capable of binding to the CXCR4-binding site of SDF-1.

15. The therapeutic agent according to claim 10, wherein the substance inhibits CXCR4 in antagonistic competition with CXCR4 for binding to SDF-1.

16. The therapeutic agent according to claim 10, wherein the substance inhibits SDF-1 from binding to CXCR4 by binding to CXCR4.

17. The therapeutic agent according to claim 15, wherein the substance is one selected from the group consisting of a soluble CXCR4 that antagonizes CXCR4 in the inhibition, a protein having a CXCR4-like structure, a fused protein of the foregoing protein with another peptide or polypeptide, a partial peptide of CXCR4, and a low molecular weight compound having a structure similar to a binding site of SDF-1.

18. The therapeutic agent according to claim 16, wherein the substance is one selected from the group consisting of an anti-CXCR4 antibody, a fragment of said antibody possessing the activity of anti-CXCR4 antibody, a fused protein possessing binding activity to CXCR4, a substance that induces a structural change in SDF-1, and a low molecular weight compound capable of binding to the SDF-1-binding site of CXCR4.

19. The therapeutic agent according to claim 6, wherein the substance is an inhibitor of a signaling system located downstream of a G protein-coupled protein and is one selected from the group consisting

of a MAPK cascade inhibitor, a ~~phosphoraipase~~ Phospholipase C (PLC) inhibitor, and a PI3 kinase inhibitor.

20. The therapeutic agent according to claim 7, wherein the substance is a substance that causes apparent disappearance of CXCR4 from cells by acting ~~on cell~~ on a cell membrane to vary fluidity thereof and to cause disappearance of CXCR4 from the cell membrane.

21. The therapeutic agent according to claim 7, wherein the substance is a substance that inhibits the ~~very~~ expression of CXCR4 and is one selected from the group consisting of an antigene, an antisense polynucleotide, an antisense RNA expressed by an antisense vector, a ribozyme, and an inhibitor against the expression control site of CXCR4.

22. The therapeutic agent according to claim 8, wherein the substance is an antisense ~~for the inhibition of~~ polynucleotide capable of inhibiting the expression of SDF-1.

23. The therapeutic agent according to claim 8, wherein the substance ~~shows inhibition against~~ inhibits the expression control site of SDF-1.

24. A method for suppressing vascularization comprising using a substance that inhibits the action due to CXCR4 to a mammal in need thereof.

25. A method for treating a solid cancer comprising ~~using~~ administering a substance that inhibits the action due to CXCR4 to a mammal in need thereof.

26. A method for treating a disease pathologically caused by neovascularization comprising ~~using~~ administering a substance that inhibits the action due to CXCR4 to a mammal in need thereof.

27. A method for repairing a tissue comprising ~~using~~ administering a substance that inhibits the action due to CXCR4 to a mammal in need thereof.

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